CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/LLR/W.No.04/CSR-05/047c/CEMENT/2016-17

Date: 26.05.2016

TEST REPORT ON CEMENT

* CUSTOMER	:	**Asst. Executive Engineer, Yelahanka** Sub Division, BBMP, Bangalore.
*AGENCY	:	**Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
*NAME OF THE WORK	:	Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
*REFERENCE	:	BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	24.05.2016
PERIOD OF TESTING	:	24.05.2016 to 26.05.2016

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	160Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	465 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

Ramsanjeev AE 26/5

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com

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Job No.: CTCE/BBMP/LLR/WNo.04/CSR-05/047c/SAND-Gradation/2016-17 : 26.05.2016

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*Customer : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

*Agency : **Mr. L Lokanatha Reddy,**
No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.

*Name of Work : Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.

*Reference : BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 24.05.2016

Date of Testing : 26.05.2016

Total Wt. of Aggregates in gms 1000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	96.00	90-100	90-100	90-100	95-100
2.36	78.50	60-95	75-100	85-100	95-100
1.18	59.20	30-70	55-90	75-100	90-100
600 Micron	33.70	15-34	35-59	60-79	80-100
300 Micron	18.40	5-20	8-30	12-40	15-50
150 Micron	6.40	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com

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Job No.: CTCE/BBMP/LLR/W.No.04/CSR-05/047c/AGG/GR/2016-17 : 26.05.2016

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
* Name of Work	: Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
* Reference	: BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
Technical Reference	: IS : 2386 Part 1 -1963 RA-2007
Sample ID	: Coarse Aggregates (40mm)
Sample Received on	: 24.05.2016
Date of Testing	: 26.05.2016

Total Wt. of Aggregates in gms= **7000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	98.07	95-100	85-100
20	39.17	30-70	0-20
10	22.20	10-35	0-5
4.75	4.26	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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T-2377

Job No.: CTCE/BBMP/LLR/W.No.04/CSR-05/047c/CC Solid Block/2016-17 : 03.06.2016

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
* Name of the Work	: Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
Reference	: BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
Sample Received on	: 30.05.2016
Date of Testing	: 03.06.2016
Size of Blocks	: 400mm x 200mm x 200mm
Cross Sectional Area	: 80000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	35.89	263.6	3.29	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.23	260.1	3.25	
3	Block 3	35.12	262.9	3.29	
4	Block 4	34.78	256.8	3.21	
5	Block 5	34.85	259.8	3.25	
6	Block 6	35.85	261.5	3.27	
7	Block 7	35.63	264.8	3.31	
8	Block 8	35.12	267.6	3.34	

*Information is furnished by the Customer/Representative.

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Civil-Tech Consultants & Engineers Bangalore

Sanjeev AE 3/6

****

VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com

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Job No.: CTCE/BBMP/LLR/W.No.04/CSR-05/047c/CC Solid Block/2016-17 : 03.06.2016

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer	: **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Agency	: **Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
* Name of the Work	: Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
Reference	: BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
Sample Received on	: 30.05.2016
Date of Testing	: 03.06.2016
Size of Blocks	: 400mm x 100mm x 200mm
Cross Sectional Area	: 40000 mm^2
Technical Reference	: IS: 2185 (Part 1) - 2005
No. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	16.58	131.4	3.29	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	16.89	132.6	3.31	
3	Block 3	17.85	129.0	3.22	
4	Block 4	17.12	128.5	3.21	
5	Block 5	16.74	130.5	3.26	
6	Block 6	17.52	133.5	3.34	
7	Block 7	16.89	129.7	3.24	
8	Block 8	16.11	131.4	3.29	

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ja@civiltechconsultants.com

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o No: CTCE/BBMP/LLR/W.No.04/CSR-05/047c/Precast Slab/2016-17 21.06.2016

CEMENT CONCRETE CORE (PRECAST SLAB) TEST REPORT

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
Name of work	:	Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
:ference	:	BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
:chinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
mple ID	:	Precast Slab
mple Received on	:	16.06.2016
ate of Testing	:	21.06.2016

	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
).	50.00	75.00	0.376	2553.27	1.50	0.950	32.3	16.45	17.77	16.88	21.10
2	50.00	77.00	0.390	2579.55	1.54	0.965	32.6	16.58	17.91	17.28	21.60
3	50.00	78.00	0.397	2592.19	1.56	0.970	33.8	17.21	18.59	18.03	22.54

Information is furnished by the Customer/Representative

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Civil-Tech Consultants & Engineers Bangalore

Ramsanjeev AE 21/6

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.in@civiltechconsultants.com

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Job No.: CTCE/BBMP/LLR/W.No.04/SDBC/Bit/2016-17 25.06.2016

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC:SP:-11-1984

CUSTOMER	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	**Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
NAME OF THE WORK	Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
SAMPLE I/D	Drains and asphalting to main and cross roads in B sector in Ward No. 04
DATE OF TESTING	25.06.2016

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	480	475
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	20	25.00
7. Bitumen content in %	4.00	5.00
8. Average	4.50	

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23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

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Job No.: CTCE/BBMP/LLR/W.No.04/SDBC/Bit/2016-17

25.06.2016

BITUMEN CONTENT GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CUSTOMER	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
AGENCY	**Mr. L Lokanatha Reddy,** No. 5, 1st H Main Road, 7th B Cross road Kaveri nagara B Block , Kaval Byrasandra, Bangalore.
NAME OF THE WORK	Improvements to drains and asphalting to main and cross roads in B sector in Ward No. 04, BBMP, Bangalore.
REFERENCE	BBMP/AEE/YNSD/73/2016-17 Dated : 24.05.2016
SAMPLE I/D	Drains and asphalting to main and cross roads in B sector in Ward No. 04
DATE OF TESTING	25.06.2016

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	25.89	5.39	5.39	94.61	90-100
4.75	252.45	52.59	57.99	42.01	35-51
2.36	50.63	10.55	68.54	31.46	24-39
1.18	41.78	8.70	77.24	22.76	15-30
0.3	25.45	5.30	82.54	17.46	9-19
0.075	56.2	11.71	94.25	5.75	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	28.56	6.01	6.01	93.99	90-100
4.75	248.78	52.37	58.39	41.61	35-51
2.36	57.12	12.03	70.41	29.59	24-39
1.18	36.52	7.69	78.10	21.90	15-30
0.3	31.89	6.71	84.81	15.19	9-19
0.075	41.7	8.78	93.59	6.41	3-8

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Tele Fax : 23223227, Website : www.civiltechconsultants.com

E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

#23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.